

FIELD TRIPS OF THE CLUB THE 1931 FIELD PROGRAM

The program of field meetings of the Torrey Botanical Club, which will appear in the usual printed booklet form not later than May 1, promises to be fuller and richer than ever before, thanks to increased coöperation of old and new leaders. These excursions will be announced, in case they are prior to the mailing of the booklet, in the weekly bulletin of the New York Academy of Sciences.

High lights of the program will be an excursion on the Palisades, for liverworts, led by Dr. Marshall A. Howe, Assistant Director of the New York Botanical Garden, Saturday, May 16; the annual Branchville, N.J., joint gathering with the Sussex Nature Club and others, led by Mr. and Mrs. William Gavin Taylor of Arlington, N.J., May 23-24; a trip to the southern Catskills over the Memorial Day week-end; joint trips at High Hill Beach, L.I., June 20-21 and August 22-23, with the Reptile Study Society, led by Miss Nellie L. Condon; a Fourth-of-July week-end at Dr. Will S. Monroe's farm, at North Duxbury, Vt., led by Mr. and Mrs. W. G. Taylor; a study of the botany of beaver dams, in the Harriman State Park, July 12, led by William H. Carr, curator of the Nature Museum at Bear Mountain; a trip to Sandy Hook, led by Prof. M. A. Chrysler of Rutgers University, July 19; a week in the northern Catskills, August 24-30, led by Dr. Alfred Gundersen, of the Brooklyn Botanic Garden; two trips at Mineola, L.I., June 28, and September 27, for myxomycetes, led by Robert Hagelstein; and three excursions for the study of fungi, June 14 and October 4, at Grassy Sprain, Westchester County, led by Dr. Michael Levine; and September 20, at Franklin Lake, New Jersey, led by Dr. William S. Thomas; besides many others, filling nearly every Saturday afternoon and Sunday until December 1. Volunteers for an alternative Fourth-of-July week-end nearer New York City and for a Columbus Day week-end are desired.

RAYMOND H. TORREY
Chairman Field Committee

FIELD TRIP OF SUNDAY, FEBRUARY 1

A brisk northwest wind and a temperature of 16° F. did not discourage 18 members and guests of the Torrey Botanical Club

from attending the field meeting on February 1, at the New York Botanical Garden.

The topics of the day were the study of the Gymnospermae with special reference to the pines, cycads and the maidenhair tree, *Ginkgo biloba*, winter aspects of trees, potholes, and the diversion of the Bronx River at a point about a half mile north of the boulder bridge.

The route started along the low ridge east of the conservatories—the section reserved for the pines. The pines reviewed were *Pinus Banksiana*, *P. rigida*, *P. pungens*, *P. virginiana*, the last being often mistaken for *P. Banksiana*, perhaps on account of the similarity of the common names (northern scrub pine for *P. Banksiana* and Jersey scrub pine for *P. virginiana*). The needles of *P. Banksiana* are divergent and about one inch long; the cones are usually curved, with pointless, almost smooth scales, and adhere to the branches, unopened, for a number of years. *P. virginiana* has needles about two inches long and the cones are also larger than those of *P. Banksiana*, while the scales are tipped with a prickle. The cones open after maturity in the second year.

Foreign pines growing here are the Scotch pine, *P. sylvestris*, from Europe and Asia, and *P. nigra*, the Austrian pine. The latter is considered to be the best ornamental pine for our climate of all the imported pines.

Descending the ridge to the eastward we passed *P. Thunbergii* from Japan, *P. ponderosa*, the western yellow pine, *P. densiflora*, the Japanese red pine, covered with a multitude of small cones, and *P. edulis* from the Rocky Mountains. After crossing the central driveway we came next to several white pines, *P. Strobus*, and close to them the decorative pyramidal variety, *P. Strobus* var. *fastigiata*. Turning toward the Alpinetum (rock garden) we saw *Quercus macrocarpa*, *Prunus virginiana*, *Ulmus americana*, *Nyssa sylvatica*, the last opposite a large group of *Corylus (avellana?)*. On the eastern edge of a rocky ledge we came to a well preserved small pothole, whose walls are intact. This same ledge shows glacial striae running northwest-southeast. Several plants of the Hercules club, *Aralia spinosa*, grow in the fissures of the rock, and nearby were several specimens of *Pinus Cembra*, a very attractive tree of the European Alps. A few yards from this group we noted several young trees of the maidenhair tree, *Ginkgo biloba*. At the next fork of our path a natural

graft of two trunks of the American elm caused considerable interest.

Finally we reached the Alpinetum, on top of which we inspected a deep and wide gouge, carved out from very hard rock of Precambrian age during the glaciation periods in early Quaternary time. We continued to the Bronx River, passing *Acer rubrum*, *A. saccharum*, *Quercus alba*, *rubra*, *palustris*, and *velutina*, *Liriodendron Tulipifera*, *Liquidambar Styraciflua*, *Cornus florida*, *Carpinus caroliniana*, *Betula lenta*, and others.

We now entered the hemlock grove with its fine stand of *Tsuga canadensis*, probably the southernmost stand of any considerable size near the seacoast. Proceeding north on the western bank of the gorge toward the boulder bridge, we came upon a solitary *Kalmia latifolia* which had escaped destruction by so-called nature lovers. Here and there the trailing shoots of *Mitchella repens* spread over the ground along the path.

About sixty feet south from the boulder bridge on our left, and about twenty-five feet from the path, we came upon the remains of a pothole about fourteen feet deep, with its eastern wall broken. Higher up on the same ledge there is another pothole. A large boulder of diabase from the Palisades was found lying at the bottom of the pothole beside a tree of considerable size. Only a few feet from this pothole is another, much smaller example. At this point the leader explained the diversion of the Bronx River from its former course along the present road-bed of the New York Central Railroad, emptying into the Harlem River at about the Third Avenue Railroad bridge, to its present course across the plain (now occupied by the Salicetum) to the gorge, emptying its waters into Long Island Sound.

Passing *Cryptomeria japonica*, *Sciadopitys verticillata*, the umbrella pine from Japan, *Cedrus atlantica* from the Atlas Mountains of North Africa, and *Diospyros virginiana*, the persimmon tree, the party now turned toward the Museum, where fossil prints and literature on fossils were inspected and discussed.

MAX A. ELWERT

SUNDAY, FEBRUARY 15

Twenty-nine members and guests made the Kreischerville, Staten Island trip, which was favored by crisp, bracing, clear weather. Nature study enthusiasts secured several large cocoons

of Cecropia moths and many large egg masses of the praying mantis. The latter spells its first name with an "a" or an "e" according to whether it is in a religious or a voracious mood. One enterprising member of the club hopes to transplant it to Inwood Park, where it may prey upon any unwary Japanese bettles dwelling therein.¹

A halt was made for lunch on a hillside near a swamp which was frozen tight. Here, besides the customary high bush blueberry, *Vaccinium corymbosum*, buttonbush, *Cephalanthus occidentalis*, and swamp azalea, *Rhododendron viscosum*, members of the party found the dead fruiting stalks of what appeared to be *Hypericum virginicum*, the marsh St. John's-wort, an herb with opposite branching and fruit pods dehiscent into three parts.

About twenty-five trees of the Virginia pine, *Pinus virginiana*, were counted near Kreischerville—the largest apparently about sixty years of age. One tree of pitch pine, *P. rigida*, of about the same age, was found among them. No young trees or seedlings of the Virginia or of the pitch pine were found, perhaps on account of the repeated forest fires here. The fire of last year had charred the outer bark of many of the trees upwards for many feet, but the inner bark in most cases seemed sound. One tree was seen which had been entirely killed by the fire. This seems to be the last stand and generation of this species on Staten Island, unless the fires can be prevented for a sufficiently long period to insure the development of a new generation.

Part of the sandy plain to the north of this little grove was traversed, and several fairly large stumps, one showing eighty annual rings, testified to a former well-forested condition. Several promising young chestnut trees were found, one about two inches in diameter at the base and apparently free from the blight.

ARTHUR H. GRAVES

¹ For a valuable article on the praying mantis, see Engelhardt, George P. Japanese praying mantis reported from the Brooklyn Botanic Garden. Brooklyn Bot. Gard. Record 15: 149-153. 1926.